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Antifriction Bearings - 1997

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Information about the scope of the survey, methodology, explanation of terms and historical notes for this survey may be found in the introduction of the 1995 Manufacturing Profiles, issued June 1997.

These data are also available through the U.S. Department of Commerce and STAT-USA Electronic Bulletin Board by subscription. To access, dial 202-482-3870 and follow the prompts to register. Also, you may call 202-482-1986 or 1-800-STAT-USA, for further information. The Internet address is: stat-usa.gov/.

For mail or fax copies of the publication, contact the Manufacturing and Construction Division Information Center, 301-457-4673.

Address inquiries concerning these data to U.S. Department of Commerce, Bureau of the Census, Manufacturing and Construction Division, Washington, DC 20233, or call JoAnna T.Q. Nguyen, 301-457-4752.

Summary of findings: The value of shipments of complete antifriction bearings and components, including balls and rollers, was \$5,735.7 million in 1997, an increase of 5 percent over shipments of \$5,488.0 million in 1996. The 1997 total includes complete ball bearings, \$2,083.8 million, an increase of 5 percent over the 1996 value of shipments; complete tapered roller bearing and roller bearing parts (except rollers), \$1,420.9 million, an increase of 1 percent; other complete roller bearings, \$1,148.7 million, an increase of 13 percent; mounted bearings (except plain), \$426.1 million, a decrease of 7 percent; and parts and components for ball and roller bearings, sold separately, \$656.3 million, an increase of 7 percent.

Table 1. Value of Shipments for Complete Antifriction Bearings and Components, Including Balls and Rollers by Product Class: 1988 to 1997
 [Millions of dollars]

Product code	Product description	1997	1996	1995	1994	1993
3562-	Ball and roller bearings.....	5,735.7 r/	5,488.0	5,205.4	4,693.8	4,331.1
35621	Ball bearings, complete.....	2,083.8 r/	1,989.1	1,896.7	1,676.2	1,616.8
35622	Tapered roller bearings, cups and cones.....	1,420.9 r/	1,408.8	1,283.1	1,139.2	1,001.0
35623	Roller bearings, complete.....	1,148.7	1,017.4	987.5	935.5	810.4
35624	Mounted bearings, except plain.....	426.1	458.4	459.7	407.8	439.4
35629	Parts and components for ball and roller bearings, including balls and rollers sold separately.....	656.3	614.3	578.5	535.1	467.0
		1992	1991	1990	1989	1988 /1
3562-	Ball and roller bearings.....	4,011.3	3,778.9	4,064.2	3,965.3	3,899.2
35621	Ball bearings, complete.....	1,484.2	1,406.7	1,469.0	1,420.9	1,497.6
35622	Tapered roller bearings, cups and cones.....	935.6	876.8	977.3	963.9	745.7
35623	Roller bearings, complete.....	773.1	794.3	872.4	849.6	834.3
35624	Mounted bearings, except plain.....	378.0	322.9	362.9	344.9	358.2
35629	Parts and components for ball and roller bearings, including balls and rollers sold separately.....	440.4	378.3	382.6	386.1	463.4

r/Revised by 5 percent or more from previously published data.

1/Data for 1988 and earlier years may not be directly comparable due to reclassification.

Table 2. Quantity and Value of Shipments of Antifriction Ball and Roller Bearings, Components, and Parts: 1997 and 1996
[Quantity in thousands of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	1997		1996	
			Quantity	Value	Quantity	Value
3562-	Antifriction bearings and components.....	(X)	(X)	5,735,695	(X)	5,487,967
35621	Ball bearings, complete.....	50	608,488	2,083,783	591,799	r/ 1,989,073
	Annular, including self-aligning:					
	Ground or precision:					
	Single row conrad:					
	Miniature (below 9 mm. O.D.):					
35621 01	Regular (ABEC 1 and 3).....	3	(D)	(D)	(D)	(D)
35621 02	Precision (ABEC 5 and up).....	4	5,905	24,400	5,665	22,259
	Other regular (ABEC 1 and 3):					
35621 03	9mm. O.D. through 30 mm. O.D.....	8	81,316	79,467	81,324	77,959
35621 04	Over 30 mm. O.D. through 52 mm. O.D.....	12	131,925	204,608	129,562	193,705
35621 05	Over 52 mm. O.D. through 100 mm. O.D....	15	38,665	212,208	38,011	215,860
35621 07	Over 100 mm. O.D.....	14	5,299	193,754	r/ 4,751	r/ 180,180
	Other precision (ABEC 5 and up):					
35621 09	9 mm. O.D. through 30 mm. O.D.....	3	5,422	69,046	5,562	61,061
35621 11	Over 30 mm. O.D. through 52 mm. O.D....	7	720	46,781	719	46,792
35621 12	Over 52 mm. O.D. through 100 mm. O.D....	7	229	36,634	214	34,396
35621 13	Over 100 mm. O.D.....	7	51	49,183	44	38,564
35621 14	Single row maximum capacity type.....	5	1,520	24,702	1,245	r/ 22,325
35621 18	Integral shaft and integral spindle ball bearings.....	7	22,631	331,398	r/ 26,881	340,096
35621 16	Double row.....	11	29,047	200,992	24,866	172,005
	Angular contact:					
35621 19	Regular.....	9	1,084	73,044	1,007	76,221
35621 22	Precision.....	3	b/ 6,285	b/ 83,081	r/ 6,578	r/ 90,506
35621 21	All other ground or precision bearings (ABEC 1 and up).....	4	(D)	(D)	(D)	(D)
35621 23	Ground bearings of less than ABEC 1 precision.....	4	c/ 6,498	b/ 44,055	4,987	32,831
35621 25	Unground, including self-aligning (less than ABEC 1).....	16	217,368	128,759	209,943	r/ 126,756
	Thrust ball bearings:					
35621 33	Ground.....	14	7,799	33,156	5,993	27,340
35621 35	Unground.....	5	5,919	a/ 12,446	c/ 5,386	a/ 11,793
35621 55	Other ball bearings.....	18	39,080	223,361	r/ 37,336	205,262
35622 -	Tapered roller bearings.....	9	264,621	1,420,860	238,529	1,408,772
35622 32	Cup and cone assemblies shipped as a set	9	(D)	(D)	(D)	(D)
35622 33	Cups shipped separately.....	6	123,233	296,618	110,935	276,181
35622 34	Cone assemblies shipped separately.....	8	(D)	(D)	(D)	(D)
35623 -	Cylindrical, spherical, needle, and other roller bearings.....	30	851,805	1,148,721	792,635	1,017,413

Table 2. Quantity and Value of Shipments of Antifriction Ball and Roller Bearings, Components, and Parts: 1997 and 1996
[Quantity in thousands of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	1997		1996	
			Quantity	Value	Quantity	Value
Cylindrical roller bearings:						
35623 11	Regular (ABEC 1 and 3).....	21	89,248	208,322	56,161	161,918
35623 12	Precision (ABEC 5 and up).....	7	181	73,441	143	r/ 57,363
Spherical roller bearings, including hourglass and barrel:						
35623 24	Single row.....	5	(D)	(D)	(D)	(D)
35623 25	Double row.....	5	808	190,827	867	177,679
35623 41	Needle roller bearings.....	7	658,399	506,252	661,881	496,855
35623 93	Other roller bearings not specified above.....	19	(D)	(D)	(D)	(D)
35624 -	Mounted bearings (except plain).....	17	9,240	426,063	9,196	458,446
35624 17	Ball bearings, unit and/or split mounted.....	13	8,112	233,464	r/ 7,904	245,714
Roller:						
35624 53	Unit mounted.....	8	1,005	164,210	1,137	178,720
35624 55	Split mounted.....	4	123	28,389	155	34,012
35629 -	Parts and components for ball and roller bearings, including balls and rollers sold separately.....	44	(X)	656,268	(X)	614,263
35629 11	Balls:					
	Shipments (quantity in millions of units).....	15	31,008	249,239	30,429	252,642
	Production for all purposes (quantity in millions of units).....	14	(S)	(X)	(S)	(X)
35629 21	Other antifriction ball and bearing components and parts, including unassembled ball bearings, cages, housing closures, races, etc.....	18	(X)	104,805	(X)	104,433
35629 31	Rollers:					
	Shipments (quantity in millions of units).....	14	16,251	141,340	14,637	124,428
	Production for all purposes (quantity in millions of units).....	9	(S)	(X)	(S)	(X)
	Other roller bearing parts and components (except rollers):					
35629 35	For tapered roller bearings (except cup and cone assemblies).....	7	(X)	80,792	(X)	r/ 51,143
35629 36	For cylindrical roller bearings.....	3	(X)	(D)	(X)	(D)
35629 37	For spherical roller bearings.....	4	(X)	(D)	(X)	(D)
35629 49	For other roller bearings.....	4	(X)	(D)	(X)	(D)
35629 59	Housing and parts and components for housings, including housing closures, collars, spacers, sleeves, adapters, and other miscellaneous items.....	3	(X)	(D)	(X)	(D)

D Withheld to avoid disclosing data for individual companies. r/Revised by 5 percent or more from previously published data. S Does not meet publication standards. X Not applicable.

Note: Percent of estimation of each item is indicated as follows: a/15 to 25 percent of this item is estimated. b/26 to 50 percent of this item is estimated. c/Over 50 percent of this item is estimated.

Table 3. Shipments, Exports, Imports, and Apparent Consumption of Antifriction Bearings and Components, Including Ball and Rollers: 1997 and 1996

[Quantity in thousands of units. Value and duty in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise 1/		Imports for consumption 2/		Apparent consumption 3/	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	C.i.f. and calculated duty	Quantity	Value
1997								
Radial ball bearings.....	546,777	1,529,024	18,132	164,027	520,486	629,436	1,049,131	1,994,433
Integral shaft and spindle ball bearings.....	22,631	331,398	1,922	22,630	18,530	51,667	39,239	360,435
Other ball bearings.....	39,080	223,361	20,139	106,972	72,714	75,135	91,655	191,524
Tapered roller bearings.....	264,621	1,420,860	20,606	260,495	65,891	169,870	309,906	1,330,235
Cylindrical roller bearings.....	89,429	281,763	2,038	53,588	10,879	108,743	98,270	336,918
Spherical roller bearings.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Needle roller bearings.....	658,399	506,252	16,353	63,069	19,899	32,722	661,945	475,905
Other roller bearings.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mounted bearings:								
Ball.....	8,112	233,464	474	21,335	2,935	22,133	10,573	234,262
Roller.....	1,128	192,599	177	10,356	2,974	13,801	3,925	196,044
Parts for ball and roller bearings:								
Balls (quantity in millions of units).....	31,008	249,239	(NA)	31,297	(NA)	13,097	31,008	231,039
Rollers (quantity in millions of units).....	16,251	141,340	(NA)	35,580	(NA)	25,189	16,251	130,949
Other parts for tapered roller and ball bearings.....	(X)	(D)	(NA)	(D)	(NA)	(D)	(NA)	(D)
1996								
Radial ball bearings.....	527,582	1,443,715	20,569	144,788	496,317	614,455	1,003,330	1,913,382
Integral shaft and spindle ball bearings..... r/	26,881	340,096	20,569	147,788	512,162	649,741	518,474	842,049
Other ball bearings..... r/	37,336	205,262	16,741	87,163	68,915	79,029	89,510	197,128
Tapered roller bearings.....	238,529 r/	1,408,772	16,980	223,678	58,480	164,664	280,029	1,349,758
Cylindrical roller bearings.....	56,304	219,281	1,787	48,153	9,417	103,880	63,934	275,008
Spherical roller bearings.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Needle roller bearings.....	661,881	496,855	12,698	40,691	19,230	27,245	668,413	483,409
Other roller bearings.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mounted bearings:								
Ball..... r/	7,904	245,714	481	19,179	2,547	21,348	9,970	247,883
Roller.....	1,292	212,732	134	7,417	2,993	13,201	4,151	218,516
Parts for ball and roller bearings:								
Balls (quantity in millions of units).....	30,429	252,642	(NA)	52,378	(NA)	14,277	30,429	214,541
Rollers (quantity in millions of units).....	14,637	124,428	(NA)	34,973	(NA)	23,144	14,637	112,599
Other parts for tapered roller and ball bearings.....	(X)	(D)	(NA)	(D)	(NA)	(D)	(NA)	(D)

D Withheld to avoid disclosing data for individual companies. NA Not available. r/Revised by 5 percent or more from previously published data. X Not applicable.

1/Source: Bureau of Census report EM 545, U.S. Exports.

2/Source: Bureau of Census reports IM 145, U.S. Imports for Consumption.

3/Apparent consumption is derived by subtracting exports from manufacturers' shipments plus imports.

Table 4. Comparasion of Standard Industrial Classification-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 1997

Product code	Product description	Export number 1/	Import number 2/
Antifriction bearings and components:			
35621--	Ball bearing complete:		
	Annular, ball bearings, include self aligning:		
35621 01	Miniature (below 9 mm. O.D.) regular (ABEC 1 and 3).....	8482.10.5004	8482.10.5004
35621 02	Miniature (below 9 mm. O.D.) precision (ABEC 1 and 3).....	8482.10.5016	8482.10.5016
35621 03	Other regular, 9 mm. O.D through 30 mm. O.D.....	8482.10.5024	8482.10.5024
35621 04	Other regular, over 30 mm. O.D through 52 mm. O.D,.....	8482.10.5028	8482.10.5028
35621 05	Other regular, over 52 mm. O.D. through 100 mm. O.D.....	8482.10.5032	8482.10.5032
35621 07	Other regular, over 100 mm. O.D.....	8482.10.5036	8482.10.5036
35621 09	Other precision, 9 mm. O.D. through 30 mm. O.D.....	8482.10.5044	8482.10.5044
35621 11	Other precision, over 30 mm. O.D. through 52 mm. O.D.....	8482.10.5048	8482.10.5048
35621 12	Other precision, over 52 mm. O.D. through 100 mm. O.D.....	8482.10.5052	8482.10.5052
35621 13	Single row maximum capacity type.....	8482.10.5056	8482.10.5056
35621 14	Double row.....	8482.10.5060	8482.10.5060
35621 16	Regular angular contact.....	8482.10.5064	8482.10.5064
35621 19	Precision angular contact.....	8482.10.5068	8482.10.5068
35621 22	All other ground or precision bearings (ABEC 1 and up).....	8482.10.1040	8482.10.1040
35621 21	Ground bearings of less than ABEC 1 Precision.....	8482.10.1000	8482.10.1080
35621 23			
35621 25	Unground, including self-aligning.....		
35621 18	Integral shaft and spindle ball bearings.....		
35621 33		8482.10.5004	8482.10.5004
35621 35	Other ball bearings.....	8482.10.5008	8482.10.5008
35621 55		8482.10.5068	8482.10.5068
35622--	Tapered roller bearings:		
35622 32		8482.20.0020	8482.20.0020
35622 33	Tapered roller bearings, including cone and tapered	8482.20.0030	8482.20.0030
35622 34	roller assemblies.....	8482.20.0040	8482.20.0040
		8482.20.0060	8482.20.0060
		8482.20.0070	8482.20.0070
		8482.20.0080	8482.20.0080
		8482.99.3010	8482.99.4510
35623--	Cylindrical, spherical, needle, and other roller bearings:		
35623 11			
35623 12	Cylindrical roller bearings.....	8482.50.0000	8482.50.0000
35623 24		8482.30.0040	8482.30.0040
35623 25	Spherical roller bearings.....	8482.30.0080	8482.30.0080
35623 41	Needle roller bearings.....	8482.40.0000	8482.40.0000
35623 93		8482.80.0040	8482.80.0040
		8482.80.0060	8482.80.0060

Table 4. Comparasion of Standard Industrial Classification-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 1997

Product code	Product description	Export number 1/	Import number 2/
		8482.80.0080	8482.80.0080
		8482.80.0020	
35624--	Mounted bearings (except plain):		8483.20.4040
35624 17	Mounted ball bearings.....	8483.20.0010	8483.20.8040
35624 53			8483.20.4080
35624 55	Mounted roller bearings.....	8483.20.0050	8483.20.8080
35629--	Parts and components for ball and roller bearings, including balls and rollers, sold separately:		
35629 11	Balls.....	8482.91.0010 8482.91.0020	8482.91.0010 8482.91.0020
		8482.91.0040 8482.91.0050	8482.91.0040 8482.91.0050
35629 31	Rollers.....	8482.91.0070 8482.91.0080	8482.91.0070 8482.91.0080
35629 21	Other anti-friction ball and roller bearing components and parts,	8482.99.1010	8482.99.1010
35629 42	inclusions unassembled bearings cages, housing cases closures,	8482.99.1050	8482.99.1050
35629 44	races, etc.	8482.99.3050	8482.99.3500
35629 46		8482.99.5000	8482.99.4550
35629 53		8482.99.7060 8483.30.5020 8483.30.5040	8482.99.6560 8483.30.8020 8483.30.8040

1/Source: 1997 edition, Harmonized System-Based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.

2/Source: Harmonized Tariff Schedule of the United States, Annotated (1997).